

December 22, 2008



**VIA CERTIFIED MAIL**

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U S EPA Region V (SR-6J)  
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**Re: NOVEMBER 2008 MONTHLY REPORT  
RI/FS & REMEDIAL DESIGN & REMOVAL ACTION  
NEASE CHEMICAL SITE  
SALEM, OHIO**

In accordance with Paragraph X E of the Administrative Order by Consent regarding a Remedial Investigation/Feasibility Study (RI/FS) of the Nease Chemical Site in Salem, Ohio, attached is a copy of the November 2008 RI/FS Progress Report. This report also includes the monthly progress report for the remedial design (OU-2) in accordance with Paragraph X of the Administrative Order on Consent, effective as of May 10, 2006.

Additionally, in accordance with Paragraph 14 of the Administrative Order by Consent, signed December 17, 1993, attached is a copy of November 2008 Removal Action Progress Report.

With approval of the agency this report was submitted later than the 10<sup>th</sup> day of the month.

Sincerely,

A handwritten signature in black ink that reads "Rainer Domalski".

Dr. Rainer F. Domalski  
Site Coordinator

Enclosures

cc M. Hardy/Heidi Goldstein – Thompson Hine  
Steve Finn – Golder Associates, Inc.

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**NEASE CHEMICAL SITE, SALEM, OHIO  
REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
REMEDIAL DESIGN (OU-2)  
MONTHLY PROGRESS REPORT  
NOVEMBER 2008**

**1. INTRODUCTION**

This progress report has been prepared in accordance with Paragraph XE of the Administrative Order of Consent (AOC) regarding a Remedial Investigation/Feasibility Study (RI/FS) and Paragraph X of the Administrative Order on Consent regarding the Remedial Design (RD/OU-2) of the Nease Chemical Site in Salem, Ohio. The report summarizes the major RI/FS and RD actions during the month along with investigation results and any problems encountered in the project. Activities planned for next month are also presented.

**2 SUMMARY OF ACTIVITIES PERFORMED**

**2.1 PROJECT ACTIVITY SUMMARY**

The activities that were initiated and/or completed during the month are described. All activities were performed in accordance with the detailed protocol provided in the approved Work Plan.

**2.2 FIELDWORK**

**2.2.1 RI/FS**

None.

**2.2.2 RD (OU-2)**

None

**2.3 Reports**

**2.3.1 RI/FS**

The final Record of Decision (ROD) for OU-3 was signed by the agency on September 24, 2008.

**2.3.2 RD (OU-2)**

**Baseline Technical Memorandum Report**

- Submittal of discrete soil sample mirex results on November 5, 2008,
- Revising the Vapor Intrusion Assessment and Mitigation Report based on comments from the agencies.
- Continued to work on a response to agency recommendations/considerations including a bedrock contour map and additional investigation work needed in the southern site area.

## 2.4 MEETINGS

None.

## 3 VARIATIONS FROM THE APPROVED WORK PLAN

None.

## 4 RESULTS OF SAMPLING, TESTS AND ANALYSES

Results from sampling events were and will be provided to the agencies in specific reports.

## 5 PROJECT SCHEDULE

The current Work Plan schedule identifies completion and target dates for project activities. Those scheduled to occur over the next several months include:

- Finalize PDI work incl the preparation of Technical Memoranda
- Start Remedial Design Workplan

## 6 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS

No significant difficulties were encountered.

## 7 PERSONNEL CHANGES

None

## 8 ANTICIPATED PROJECT ACTIVITIES FOR NOVEMBER 2008

- Monthly Progress Report October 2008
- RD (OU-2)
  - Baseline Technical Memorandum Report –
    - Response to agency recommendations and considerations and for implementation of interim measures for the removal of NAPL at TW06-21.
    - Submit a revised Vapor Intrusion Assessment and Mitigation Report based on agency comments.
    - Submit letters to adjacent property owner's presenting the sampling results and boring logs for monitoring wells installed in their property.
    - Bedrock contour map.

**TABLE 1**  
**NEASE CHEMICAL SITE, SALEM, OHIO**  
**RI/FS AND RD (OU-2) SCHEDULE**

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE	
	RI/FS	RD (OU-2)
	Documentation of the Site Activities through July 31, 2004 can be reviewed in the July 2004 Monthly Progress Report	
August 30, 2004	US EPA Region VI/ OEPA approve Endangerment Assessment	
September 1, 2004	Draft Feasibility Study (OU-2) submitted to the agencies for review	
September 9, 2004	Submit Monthly Progress Report	
September 13, 2004	Submit Final Revision to Endangerment Assessment	
October 8, 2004	Submit Monthly Progress Report	
November 10, 2004	Submit Monthly Progress Report	
November 22, 2004	Received Agencies' comments for draft FS (OU-2)	
December 10, 2004	Submit Monthly Progress Report	
January 10, 2005	Submit Monthly Progress Report	
February 10, 2005	Submit Monthly Progress Report	
March 1, 2005	Final Draft Feasibility Study (OU-2) submitted to agencies for review	
March 4, 2005	Submit Monthly Progress Report	
April 8, 2005	Submit Monthly Progress Report	
April 21, 2005	US EPA Region VI/OEPA approve Final Feasibility Study for OU-2	
May 9, 2005	Submit Monthly Progress Report	
May 31, 2005	US EPA Region V published the Proposed Remedial Action the OU-2 (onsite)	
June 9, 2005	Submit Monthly Progress Report	
July 8, 2005	Submit Monthly Progress Report	
August 10, 2005	Submit Monthly Progress Report	
Aug 1 – 15, 2005	MFLBC – Reconnaissance of sediment bodies	
September 9, 2005	Submit Monthly Progress Report	
September 29, 2005	US EPA Region V signs Final Record of Decision for OU-2	
Oct 10, 2005	Submit Monthly Progress Report	

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE	
	RI/FS	RD (OU-2)
November 9, 2005	Submit Monthly Progress Report	
December 8, 2005	Submit Monthly Progress Report	
January 9, 2006	Submit Monthly Progress Report	
February 8, 2006	Submit Monthly Progress Report	
March 15, 2006	Submit Monthly Progress Report	
April 10, 2006	Submit Monthly Progress Report	
May 8, 2006	Submit Monthly Progress Report	
May 10, 2006		Administrative Order on Consent for OU-2 Remedial Design effective
May 25, 2006		Submittal of draft PDI Workplan
June 8, 2006	Submit Monthly Progress Report	
June 9, 2006		ACO Financial Assurance – Trust Fund placed
June 28, 2006		US EPA comments to draft PDI workplan received
July 10, 2006	Submit Monthly Progress Report	
July 12, 2006		Sampling of well PZ-6B-U
Aug 1, 2006		Submit revised PDI Workplan
Aug 4, 2006	Submit Monthly Progress Report	
Aug. 21, 2006		Commenced with PDI Fieldwork
Aug 28, 2006		Conditional Approval of PDI Workplan
Sept. 8, 2006	Submit Monthly Progress Report	
Sept 18, 2006	Soil Sampling in the MFLBC Flood Plain	
Sept. 27, 2006		Submit Final PDI Workplan incl response to agencies' comments
October 8, 2006	Submit Monthly Progress Report	
Nov. 6, 2006	Submit Monthly Progress Report	
Dec 12, 2006	Submit Monthly Progress Report	
Dec 13, 2006	OU-3 Meeting in US EPA Chicago Office	
Jan 8, 2007	Submit Monthly Progress Report	
Febr 6, 2007	Submit Monthly Progress Report	
March 7, 2007		Submittal S/S/S Treatability Study Report through Phase III
March 19, 2007	Submit Monthly Progress Report	
March 22, 2007		Submittal Proposal Bio-Treatability Study for Benzene in Groundwater
April 4, 2007	Submit Monthly Progress Report	
May 21, 2007	Submit Monthly Progress Report	
June 7, 2007	Submit Monthly Progress Report	

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
June 13, 2007	Submit Technical Memorandum – Baseline Conditions to agencies
June 30, 2007	Installed Sub-slab Vapor Systems at two residential homes
July 6, 2007	Submit Monthly Progress Report
August 1, 2007	Agencies' approval for Phase IV S/S/S Treatability Study
Aug 7, 2007	Submit Monthly Progress Report
September 24, 2007	Submit Monthly Progress Report
October 5, 2004	Submit Monthly Progress Report
November 7, 2007	Submit Monthly Progress Report
December 12, 2007	Submit Interim Deliverable for OU- 3 FS
December 21, 2007	Submit Monthly Progress Report
January 3, 2008	Submit Monthly Progress Report
February 7, 2008	Submit Monthly Progress Report
February 28, 2008	<ul style="list-style-type: none"> <li>○ Letter to agencies about Proposed Mirex Analysis of discrete soil samples</li> <li>○ Memo to agencies regarding Analytical Laboratories for Mirex Testing</li> </ul>
February 29, 2008	Submit Vapor Intrusion Report to agencies.
March 3, 2008	Submit Monthly Progress Report
March 11, 2008	Submit S/S/S Treatability Study to agencies
March 14, 2008	Submit NZVI Pilot Study to agencies
March 20, 2008	Submit Draft FS (OU-3) to agencies
April 8, 2008	Submit Monthly Progress Report
May 7, 2008	Submit Monthly Progress Report
June 5, 2008	Received Agencies' Comments to Draft FS (OU-3) Submit Revised Final FS (OU-3) to Agencies
June 12, 2008	Submit Monthly Progress Report
June 30, 2008	Received approval of Final FS (OU-3)
July 7, 2008	Submit Monthly Progress Report
July 14 – Aug 13, 2008	Public comment period (OU- 3/PRAP)
July 31, 2008	Public Meeting (OU-3/PRAP)
Aug 28, 2008	Submit Monthly Progress Report

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
Sept 11, 2008	Submit Monthly Progress Report
Sept 24, 2008	OU-3 Record of Decision signed by agency
Oct 28, 2008	Submit Monthly Progress Report
Nov. 5, 2008	Submit Discrete Soil Sample Mirex Results to agencies
Nov 11, 2008	Submit Monthly Progress Report
Dec 22, 2008	Submit Monthly Progress Report

**NEASE CHEMICAL SITE, SALEM, OHIO  
REMOVAL ACTION  
MONTHLY PROGRESS REPORT  
OCTOBER 2008**

**1.0 INTRODUCTION**

This progress report has been prepared in accordance with Paragraph 14 of the "Order" section of the Administrative Order by Consent (AOC) Docket No V-W-94-C-212, effective November 17, 1993 regarding a Removal Action for the Nease Chemical Site in Salem, Ohio. The report summarizes the major activities during the month along with investigation results and any problems encountered on the project. Activities planned for next month are also presented.

**2.0 SUMMARY OF ACTIVITIES PERFORMED**

**2.1 PROJECT ACTIVITY**

The activities that were initiated and/or completed during this month are described below. Activities were performed in accordance with the Removal Action AOC.

Ohio EPA performed a RCRA Site inspection during this month. The inspection from OEPA was received with a letter dated June 20, 2008.

The following work was performed:

- Update of Site Emergency Plan
- The removal of an old metal tank and a plastic container was conducted in the last week of August. The recovered sediments as well as the soil recovered during the PDI drench work were disposed off at the EQ-Landfill in Michigan on October 1, 2008.
- Golder took an inventory of every container in the warehouse on the Salem Site. The waste was classified appropriately – non-hazardous/hazardous. The disposal of the waste will be performed in November 2008.
- In the future, the classification of the waste will be handled through Golder, ROC's technical consultant.
- Several old activated carbon units will be scrapped after thorough cleanup.

**2.2 WORK PLAN PREPARATION/REPORTS**

None

**2.3 FIELDWORK**

**2.3.1 SITE INSPECTIONS**

The results of the monthly site inspection carried out at the site on October 28, 2008 are shown in Attachment 1.



### **2.3.2 MONTHLY WATER LEVEL MEASUREMENTS**

*The next water level monitoring in wells will occur in January 2009.*

### **2 3.3 TREATMENT PLANT OPERATION**

The treatment plant operated mostly normal throughout the month.

### **2 4.1.1 MEETINGS**

None

## **3.0 VARIATIONS FROM THE APPROVED REMOVAL ACTION WORK PLAN**

None

## **4.0 RESULTS OF INSPECTIONS, ENVIRONMENTAL SAMPLING, TESTS AND ANALYSES**

Water monitoring samples were collected from the treatment plant on November 4 and 18, 2008 (Attachments 2 and 3). Also attached are the mirex-sampling results from October 21 16, 2008 which were not available for the last monthly report (Attachment 4) Two acute toxicity evaluations were conducted from November 19 through 23, 2008 (Attachment 5).

## **5.0 PROJECT SCHEDULE**

None.

## **6.0 DIFFICULTIES ENCOUNTERED AND ACTION TAKEN TO RESOLVE PROBLEMS**

None

## **7.0 PERSONNEL CHANGES**

None.

## **8.0 TYPES AND QUANTITIES OF REMOVED MATERIALS**

For the period from November 1 through 30, 2008 the following material was removed.

- 54,000 gallons of leachate and/or backwash water were disposed off-site during this month.
- Approximately 50,818 gallons were pumped from Leachate Collection System 1 (LCS-1) (total for LCS-1 =22,005,481 gal).
- 4,015 gallons were pumped from Leachate Collection System 2 (LCS-

2) (total for LCS-2 = 1,747,614 gal).

- No water was pumped from Pond 1 (total for the pond = 1,034,375 gallons).
- Approximately 6 pounds of organic compounds were removed during pumping (estimate based on average VOC/SVOC concentrations for each source).

## **9.0 ANTICIPATED PROJECT ACTIVITIES FOR DECEMBER 2008**

Removal Action activities scheduled for the upcoming month include on-going implementation of the approved Removal Action Work Plan involving:

- Collection of groundwater from the existing collection systems LCS-1, LCS-2 and Pond 1.
- Monthly Progress Report for November 2008
- Closure report for tank removal

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**TABLE 1**  
**NEASE CHEMICAL SITE, SALEM, OHIO**  
**REMOVAL ACTION SCHEDULE**

<b>DATE</b>	<b>TASK/ACTIVITY/DELIVERABLE/MILESTONE</b>
	Documentation of the Site Activities through July 31, 2004 can be reviewed in the July 2004 Monthly Progress Report
September 9, 2004	Submit Monthly Progress Report
October 8, 2004	Submit Monthly Progress Report
November 10, 2004	Submit Monthly Progress Report
December 10, 2004	Submit Monthly Progress Report
January 10, 2005	Submit Monthly Progress Report
February 10, 2005	Submit Monthly Progress Report
March 4, 2005	Submit Monthly Progress Report
April 8, 2005	Submit Monthly Progress Report
May 9, 2005	Submit Monthly Progress Report
June 9, 2005	Submit Monthly progress Report
July 8, 2005	Submit Monthly Progress Report
August 10, 2005	Submit Monthly Progress Report
September 9, 2005	Submit Monthly Progress Report
October 10, 2005	Submit Monthly Progress Report
November 9, 2005	Submit Monthly Progress Report
December 8, 2005	Submit Monthly Progress Report
January 9, 2006	Submit Monthly Progress Report
February 8, 2006	Submit Monthly Progress Report
March 15, 2006	Submit Monthly Progress Report
April 10, 2006	Submit Monthly Progress Report
May 8, 2006	Submit Monthly Progress Report
June 8, 2006	Submit Monthly Progress Report
July 10, 2006	Submit Monthly Progress Report
August 4, 2006	Submit Monthly Progress Report
September 8, 2006	Submit Monthly Progress Report
October 8, 2006	Submit Monthly Progress Report
November 6, 2006	Submit Monthly Progress Report
December 12, 2006	Submit Monthly Progress Report
January 8, 2007	Submit Monthly Progress Report
February 6, 2007	Submit Monthly Progress Report
March 19, 2007	Submit Monthly Progress Report
April 4, 2007	Submit Monthly Progress Report
May 21, 2007	Submit Monthly Progress Report

DATE	TASK/ACTIVITY/DELIVERABLE/MILESTONE
June 7, 2007	Submit Monthly Progress Report
July 6, 2007	Submit Monthly Progress Report
July 2-14, 2007	Implement Treatment Plant Modifications
August 7, 2007	Submit Monthly Progress Report
Sept. 14, 2007	Submit Monthly Progress Report
October 5, 2004	Submit Monthly Progress Report
November 7, 2007	Submit Monthly Progress Report
December 21, 2007	Submit Monthly Progress Report
January 3, 2008	Submit Monthly Progress Report
February 7, 2008	Submit Monthly Progress Report
March 3, 2008	Submit Monthly Progress Report
April 8, 2008	Submit Monthly Progress Report
May 7, 2008	Submit Monthly Progress Report
June 12, 2008	Submit Monthly Progress Report
July 7, 2008	Submit Monthly Progress Report
Aug. 28, 2008	Submit Monthly Progress Report
Sept 11, 2008	Submit Monthly Progress Report
October 28, 2008	Submit Monthly Progress Report
November 6, 2008	Submit Monthly Progress Report
December 22, 2008	Submit Monthly Progress Report

**ATTACHMENT 1**

**RESULTS OF MONTHLY SITE INSPECTION  
NEASE CHEMICAL SITE, SALEM, OHIO  
NOVEMBER 2008**

**SITE INSPECTION FORM**  
**RUETGERS-NEASE CORPORATION**  
**Nease Site, Salem, Ohio**

Date of Inspection: 11-28-08

Entry Time: 1300 Hrs. Exit Time: 1500 Hrs.

Weather: CLOUDY, LT. SNOW, 32°

Inspector's Name: DENNIS L. LANE

Inspector's Company: Howells and Baird, Inc.

**INSPECTION RESULTS**

SPECIFIC OBSERVATIONS: Structures

(Responses: S = Satisfactory U = Unsatisfactory Yes/No Levels Measured in Feet, N/A = Not Applicable)

	Pump	Quick Connect	Water Level	Berm Erosion	Visible Leakage
Leachate Collection System 1 (LCS-1)	S	S	9.81	N/A	No
Leachate Collection System 2 (LCS-2)	S	S	12.02	N/A	No
Pond 1 Pumphouse	S	S	10.41	N/A	No
Pond 1 Berm	N/A	N/A	N/A	No	No
Pond 2 Embankment	N/A	N/A	N/A	No	No
Exclusion Area A Embankment	N/A	N/A	N/A	No	No
Storage Tank	N/A	S	4.72	N/A	No
Other (specify)					

## SPECIFIC OBSERVATIONS:

## Sediment Barriers

## Condition of Sediment Barriers

Barrier ID	Fabric Intact?	By Passing Evident?	Is Maintenance Necessary?
Sediment Control Structure 1	YES	No	No
Sediment Control Structure 2	YES	No	No
Fabric Barrier 2	YES	No	No
Fabric Barrier 3	YES	No	No
Fabric Barrier 4	YES	No	No
Fabric Barrier 5	YES	No	No
Fabric Barrier 8	YES	No	No
Fabric Barrier 9	YES	No	No
Fabric Barrier 10	YES	No	No
Rock Barrier 1	YES	No	No
Rock Barrier 2	YES	No	No
Pond 7 - North	YES	No	No
Pond 7 - South	YES	No	No

## SPECIFIC OBSERVATIONS:

Seeps (if present, use more forms, as necessary)

Seep ID (yr-month-#)	Located on Map	Areal Extent (ft 2)	Magnitude (flow?, ponding?)
94-7-1	YES	20	Non-Flowing Seep
96-8-2	YES	20	Non-Flowing Seep

Note: Seep ID # equal the "nth" observed seep during the yr-month in question

## ADDITIONAL OBSERVATION OR REMARKS:

Inspector's Name:

DENNIS L. LANE

Inspector's Signature:

Dennis L. Lane

Date:

11-28-08

**ATTACHMENT 2**

**WATER SAMPLING RESULTS – NOVEMBER 4, 2008  
NEASE CHEMICAL SITE, SALEM, OHIO**



## ANALYTICAL REPORT

SALEM, OHIO SITE

Lot #: A8K050201

Dr. Rainer Domalski

Rutgers Organics Corporation  
201 Struble Road  
State College, PA 16801

TESTAMERICA LABORATORIES, INC.



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Kenneth J. Kuzior  
Project Manager  
ken.kuzior@testamericainc.com

Approved for release  
Kenneth J. Kuzior  
Project Manager  
11/19/2008 11:08 AM

November 17, 2008

TestAmerica Laboratories, Inc.

TestAmerica North Canton 4101 Shuffel Street NW, North Canton, OH 44720

Tel (330)497-9396 Fax (330)497-0772 [www.testamericainc.com](http://www.testamericainc.com)



## SAMPLE SUMMARY

A8K050201

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
K19R1	001	INFLUENT		11/04/08	13:00
K19R7	002	OUTFALL		11/04/08	13:00

### NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages
- All calculations are performed before rounding to avoid round-off errors in calculated results
- Results noted as "ND" were not detected at or above the stated limit
- This report must not be reproduced, except in full, without the written approval of the laboratory
- Results for the following parameters are never reported on a dry weight basis color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Rutgers Organics Corporation

Client Sample ID: INFLUENT

General Chemistry

Lot-Sample #...: A8K050201-001    Work Order #...: K19R1    Matrix.....: WG  
 Date Sampled...: 11/04/08 13:00    Date Received...: 11/05/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate as N	0.20	0.10	mg/L	MCAWW 300.0A	11/05/08	8311237
		Dilution Factor: 1				
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	11/05/08	8311238
		Dilution Factor: 1				
Nitrogen, as Ammonia	ND	2.0	mg/L	MCAWW 350.2	11/11/08	8316434
		Dilution Factor: 1				
Total phosphorus	0.2	0.1	mg/L	MCAWW 365.2	11/10/08	8315478
		Dilution Factor: 1				

Rutgers Organics Corporation

Client Sample ID: OUTFALL

General Chemistry

Lot-Sample #...: A8K050201-002    Work Order #...: K19R7    Matrix.....: WG  
 Date Sampled...: 11/04/08 13:00    Date Received...: 11/05/08

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrate as N	ND	0.10	mg/L	MCAWW 300.0A	11/05/08	8311237
		Dilution Factor: 1				
Nitrite as N	ND	0.10	mg/L	MCAWW 300.0A	11/05/08	8311238
		Dilution Factor: 1				
Nitrogen, as Ammonia	ND	2.0	mg/L	MCAWW 350.2	11/11/08	8316434
		Dilution Factor: 1				
Total phosphorus	0.2	0.1	mg/L	MCAWW 365.2	11/10/08	8315478
		Dilution Factor: 1				



**ATTACHMENT 3**

**WATER SAMPLING RESULTS – NOVEMBER 18, 2008  
NEASE CHEMICAL SITE, SALEM, OHIO**

# TESTAMERICA LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

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The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.  
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Lot #: A8K190161      **Rutgers Organics Corporation**      PAGE 1  
SALEM, OHIO SITE      Date Reported: 12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: INFLUENT

Sample #: 001      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

### Inorganic Analysis

Reviewed

pH Aqueous	7.2		No Units	SW846 9040B
Filterable Residue (TDS)	420	10	mg/L	MCAWW 160.1
Non-Filterable Residue (TSS)	6.0	4.0	mg/L	MCAWW 160.2

Client Sample ID: LGAC 2-3

Sample #: 002      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

### Volatile Organics by GC/MS

Reviewed

Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

## PRELIMINARY DATA SUMMARY

Rutgers Organics Corporation		PAGE	2
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Sample #: 002      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

Reviewed

cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846	8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
n-Propylbenzene	ND	1.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846	8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846	8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	1.0	ug/L	SW846	8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846	8260B
o-Xylene	ND	1.0	ug/L	SW846	8260B

Reviewed

pH Aqueous	7.9		No Units	SW846 9040B
Filterable Residue (TDS)	430	10	mg/L	MCAWW 160.1
Non-Filterable Residue (TSS)	ND	4.0	mg/L	MCAWW 160.2

(Continued on next page)



**TESTAMERICA LABORATORIES, INC.**

## PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Rutgers Organics Corporation		PAGE	3
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: OUTFALL

Sample #: 003      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

Mercury in Liquid Waste (Manual Cold-Vapor)					Reviewed
Mercury	ND	0.00020	mg/L	SW846 7470A	

ICP-MS (6020)						Reviewed
Silver	ND	0.0010	mg/L	SW846	6020	
Aluminum	ND	0.050	mg/L	SW846	6020	
<b>Arsenic</b>	<b>0.0080</b>	<b>0.0010</b>	<b>mg/L</b>	<b>SW846</b>	<b>6020</b>	
Beryllium	ND	0.0010	mg/L	SW846	6020	
Cadmium	ND	0.0010	mg/L	SW846	6020	
Chromium	ND	0.0020	mg/L	SW846	6020	
Copper	ND	0.0020	mg/L	SW846	6020	
<b>Iron</b>	<b>0.35</b>	<b>0.050</b>	<b>mg/L</b>	<b>SW846</b>	<b>6020</b>	
<b>Nickel</b>	<b>0.0053</b>	<b>0.0020</b>	<b>mg/L</b>	<b>SW846</b>	<b>6020</b>	
Lead	ND	0.0010	mg/L	SW846	6020	
Antimony	ND	0.0020	mg/L	SW846	6020	
Thallium	ND	0.0010	mg/L	SW846	6020	
Zinc	ND	0.010	mg/L	SW846	6020	

Volatile Organics by GC/MS					Reviewed
Acetone	ND	10	ug/L	SW846 8260B	
Benzene	ND	1.0	ug/L	SW846 8260B	
Bromobenzene	ND	1.0	ug/L	SW846 8260B	
Bromochloromethane	ND	1.0	ug/L	SW846 8260B	
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	
Bromoform	ND	1.0	ug/L	SW846 8260B	
Bromomethane	ND	1.0	ug/L	SW846 8260B	
2-Butanone	ND	10	ug/L	SW846 8260B	
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B	
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B	
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	
Chloroethane	ND	1.0	ug/L	SW846 8260B	
Chloroform	ND	1.0	ug/L	SW846 8260B	
Chloromethane	ND	1.0	ug/L	SW846 8260B	
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	

(Continued on next page)

## PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Rutgers Organics Corporation		PAGE	4
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: OUTFALL

Sample #: 003      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

## Volatile Organics by GC/MS

Reviewed

4-Chlorotoluene	ND	1.0	ug/L	SW846	8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
Dibromomethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846	8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
n-Propylbenzene	ND	1.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846	8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846	8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	1.0	ug/L	SW846	8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846	8260B

(Continued on next page)

# TESTAMERICA LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.

Lot #: A8K190161      **Rutgers Organics Corporation**      PAGE 5  
SALEM, OHIO SITE      Date Reported: 12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: OUTFALL

Sample #: 003      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

Volatile Organics by GC/MS      Reviewed

o-Xylene	ND	1.0	ug/L	SW846 8260B
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Semivolatile Organic Compounds by GC/MS      Reviewed

Anthracene	ND	10	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
<b>Phenyl sulfone</b>	<b>1.5 J</b>	<b>2.0</b>	<b>ug/L</b>	<b>SW846 8270C</b>
3,4-Dichloronitrobenzene	ND	10	ug/L	SW846 8270C

J Estimated result Result is less than RL

Organochlorine Pesticides      Reviewed

Methoxychlor	ND	0.10	ug/L	SW846 8081A
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# TESTAMERICA LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

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Lot #: A8K190161      Rutgers Organics Corporation      PAGE 6  
SALEM, OHIO SITE      Date Reported: 12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: OUTFALL

Sample #: 003      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

Inorganic Analysis				Reviewed
Biochemical Oxygen Demand	ND	2	mg/L	MCAWW 405.1
Weak Acid Dissociable CN	ND	0.010	mg/L	SM18 4500-CN-I
Chemical Oxygen Demand	ND	20	mg/L	MCAWW 410.4
N-Hexane Extractable Material (1664A)	ND	5.0	mg/L	CFR136A 1664A HEM
Ammonia Nitrogen	ND	2.0	mg/L	MCAWW 350.2
pH Aqueous	8.2		No Units	SW846 9040B
Filterable Residue (TDS)	480	10	mg/L	MCAWW 160.1
Total Organic Carbon	ND	1	mg/L	SW846 9060
Non-Filterable Residue (TSS)	ND	4.0	mg/L	MCAWW 160.2

Client Sample ID: TRIP BLANK

Sample #: 004      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: WATER

Volatile Organics by GC/MS				Reviewed
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	10	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	1.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B

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## PRELIMINARY DATA SUMMARY

Rutgers Organics Corporation		PAGE	7
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Sample #: 004 Date Sampled: 11/18/08 13:00 Date Received: 11/19/08 Matrix: WATER

Reviewed

1,2-Dibromoethane	ND	1.0	ug/L	SW846	8260B
Dibromomethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846	8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846	8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846	8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846	8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
1,3-Dichloropropane	ND	1.0	ug/L	SW846	8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846	8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846	8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846	8260B
Ethylbenzene	ND	1.0	ug/L	SW846	8260B
Isopropylbenzene	ND	1.0	ug/L	SW846	8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846	8260B
Methylene chloride	ND	1.0	ug/L	SW846	8260B
n-Propylbenzene	ND	1.0	ug/L	SW846	8260B
Styrene	ND	1.0	ug/L	SW846	8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846	8260B
Tetrachloroethene	ND	1.0	ug/L	SW846	8260B
Toluene	ND	1.0	ug/L	SW846	8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846	8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846	8260B
Trichloroethene	ND	1.0	ug/L	SW846	8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846	8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846	8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846	8260B
Vinyl chloride	ND	1.0	ug/L	SW846	8260B
m-Xylene & p-Xylene	ND	2.0	ug/L	SW846	8260B
o-Xylene	ND	1.0	ug/L	SW846	8260B

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$$1 \gg -\beta^3 \gg \frac{1}{4} \hat{O}_2 \gg \frac{1}{4} \hat{O}_1 \gg -\hat{O} \times \frac{1}{6}$$

## PRELIMINARY DATA SUMMARY

Rutgers Organics Corporation		PAGE	8
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Sample #: 005 Date Sampled: 11/18/08 13:00 Date Received: 11/19/08 Matrix: AIR

Volatile Organics by TO14 A (Low Level)					Reviewed
Benzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Bromodichloromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Bromoform	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Carbon tetrachloride	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dibromochloromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chloroform	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dibromoethane (EDB)	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dibromomethane	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
<b>1,2-Dichlorobenzene</b>	<b>2.6</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
1,3-Dichlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,4-Dichlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dichlorodifluoromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1-Dichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
<b>cis-1,2-Dichloroethene</b>	<b>5.2</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
trans-1,2-Dichloroethene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1-Dichloroethene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dichloropropane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
cis-1,3-Dichloropropene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
trans-1,3-Dichloropropene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Ethylbenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Cumene	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
n-Propylbenzene	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
Styrene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1,2,2-Tetrachloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
<b>Tetrachloroethene</b>	<b>3.1</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
Toluene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1,1-Trichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1,2-Trichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Trichloroethene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Trichlorofluoromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2,3-Trichloropropane	ND	1.2	ppb (v/v)	EPA-2 TO-14A	
1,3,5-Trimethylbenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Vinyl chloride	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
m-Xylene & p-Xylene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	

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# TESTAMERICA LABORATORIES, INC.

## PRELIMINARY DATA SUMMARY

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 The results shown below may still require additional laboratory review and are subject to change. Actions taken based on these results are the responsibility of the data user.  
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Rutgers Organics Corporation PAGE 9

Lot #: A8K190161 SALEM, OHIO SITE Date Reported: 12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
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Client Sample ID: AGAC 1-2-11-18-08

Sample #: 005      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: AIR

Volatile Organics by TO14 A (Low Level)					Reviewed
o-Xylene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	

Client Sample ID: AGAC-F-11-18-08

Sample #: 006      Date Sampled: 11/18/08 13:00      Date Received: 11/19/08      Matrix: AIR

Volatile Organics by TO14 A (Low Level)					Reviewed
Benzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Bromodichloromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Bromoform	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Carbon tetrachloride	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dibromochloromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Chloroform	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dibromoethane (EDB)	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dibromomethane	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
<b>1,2-Dichlorobenzene</b>	<b>1.5</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
1,3-Dichlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,4-Dichlorobenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Dichlorodifluoromethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1-Dichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
<b>cis-1,2-Dichloroethene</b>	<b>3.9</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
trans-1,2-Dichloroethene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1-Dichloroethene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,2-Dichloropropane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
cis-1,3-Dichloropropene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
trans-1,3-Dichloropropene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Ethylbenzene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
Cumene	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
n-Propylbenzene	ND	1.0	ppb (v/v)	EPA-2 TO-14A	
Styrene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1,2,2-Tetrachloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
<b>Tetrachloroethene</b>	<b>2.6</b>	<b>0.50</b>	<b>ppb (v/v)</b>	<b>EPA-2 TO-14A</b>	
Toluene	ND	0.50	ppb (v/v)	EPA-2 TO-14A	
1,1,1-Trichloroethane	ND	0.50	ppb (v/v)	EPA-2 TO-14A	

(Continued on next page)

## PRELIMINARY DATA SUMMARY

Rutgers Organics Corporation		PAGE	10
Lot #: A8K190161	SALEM, OHIO SITE	Date Reported:	12/05/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
-----------	--------	--------------------	-------	----------------------

Sample #: 006 Date Sampled: 11/18/08 13:00 Date Received: 11/19/08 Matrix: AIR

Reviewed

1,1,2-Trichloroethane	ND	0.50	ppb (v/v)	EPA-2	TO-14A
Trichloroethene	ND	0.50	ppb (v/v)	EPA-2	TO-14A
Trichlorofluoromethane	ND	0.50	ppb (v/v)	EPA-2	TO-14A
1,2,3-Trichloropropane	ND	1.2	ppb (v/v)	EPA-2	TO-14A
1,3,5-Trimethylbenzene	ND	0.50	ppb (v/v)	EPA-2	TO-14A
Vinyl chloride	ND	0.50	ppb (v/v)	EPA-2	TO-14A
m-Xylene & p-Xylene	ND	0.50	ppb (v/v)	EPA-2	TO-14A
o-Xylene	ND	0.50	ppb (v/v)	EPA-2	TO-14A



**ATTACHMENT 4**

**MIREX SAMPLING RESULTS – OCTOBER 21, 2008  
NEASE CHEMICAL SITE, SALEM, OHIO**



3058 Research Drive  
State College, Pennsylvania 16801 USA  
Telephone: 814 272.1039  
Fax: 814.272 1019

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## **Analytical Report**

### **Test America Laboratories**

**MPI Research Report: L0016102**

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#### ***Testing Laboratory***

MPI Research  
3058 Research Drive  
State College, PA 16801

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#### ***Requester***

Ken Kuzior  
Test America Laboratories  
4101 Shuffel Drive NW  
North Canton, OH 44720



3058 Research Drive  
State College, Pennsylvania 16801 USA  
Telephone 814.272.1039  
Fax: 814 272.1019

## Analytical Report

Client ID: INFLUENT

Lab ID L0016102-0001

PARAMETER	UNITS	RESULT	LIMIT OF QUANTITATION	TEST METHOD	TEST DATE	ANALYST
<u>PESTICIDE ANALYSIS</u>						
KEPONE	ug/L	U 0.042	0.042	SOP 6.2	13-Nov-08	AEC
PHOTOMIREX	ug/L	U 0.006	0.006	SOP 6.2	13-Nov-08	AEC
MIREX	ug/L	U 0.002	0.002	SOP 6.2	13-Nov-08	AEC

Client ID LGAC 2-3

Lab ID L0016102-0002

PARAMETER	UNITS	RESULT	LIMIT OF QUANTITATION	TEST METHOD	TEST DATE	ANALYST
<u>PESTICIDE ANALYSIS</u>						
KEPONE	ug/L	U 0.042	0.042	SOP 6.2	13-Nov-08	AEC
PHOTOMIREX	ug/L	U 0.006	0.006	SOP 6.2	13-Nov-08	AEC
MIREX	ug/L	U 0.002	0.002	SOP 6.2	13-Nov-08	AEC

Client ID OUTFALL

Lab ID L0016102-0003

PARAMETER	UNITS	RESULT	LIMIT OF QUANTITATION	TEST METHOD	TEST DATE	ANALYST
<u>PESTICIDE ANALYSIS</u>						
KEPONE	ug/L	U 0.042	0.042	SOP 6.2	13-Nov-08	AEC
PHOTOMIREX	ug/L	U 0.006	0.006	SOP 6.2	13-Nov-08	AEC
MIREX	ug/L	U 0.002	0.002	SOP 6.2	13-Nov-08	AEC

**ATTACHMENT 5**

**RESULTS OF TWO ACUTE TOXICITY EVALUATIONS  
NOVEMBER 19 THROUGH 23, 2008  
NEASE CHEMICAL SITE, SALEM, OHIO**

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF  
RUTGERS ORGANICS CORPORATION,  
SALEM SITE LAGOON WATER TREATMENT PLANT  
FINAL EFFLUENT

AAT JOB # 51 - 01 – 87

19 November – 23 November 2008

Report Prepared for:

Rutgers Organics Corporation  
201 Struble Road  
State College, Pennsylvania 16801

Report Prepared by:

AMERICAN AQUATIC TESTING, INC.  
890 NORTH GRAHAM STREET  
ALLENTOWN, PENNSYLVANIA 18109

## INTRODUCTION

A set of two static acute toxicity tests were conducted with larval fathead minnows, *Pimephales promelas* (*P. promelas*) and the freshwater cladoceran, *Ceriodaphnia dubia* (*C. dubia*) to determine the relative toxicity of final effluent from the Rutgers Organics Corporation Lagoon Water Treatment Plant, Salem, Ohio. The 96-hour static fathead acute toxicity test and the 48-hour static *C. dubia* acute toxicity tests were conducted from 19 November through 23 November 2008. The toxicity evaluations were conducted by American Aquatic Testing, Inc., Allentown, Pennsylvania.

All tests were performed according to procedures outlined in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, 4<sup>th</sup> Edition (EPA/600/4-90/027F) and Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency, October 1991.

## MATERIALS

### TEST ORGANISMS

#### Fathead Minnow, *Pimephales promelas*

Larval fathead minnows used in acute testing were obtained from in-house cultures maintained by ABS, Inc.. Test age organisms are maintained in shallow depth basins containing 10L of moderately hard reconstituted water and are fed newly hatched *Artemia* (brine shrimp) nauplii twice a day up until test initiation. The test organisms were 9 days old at test initiation. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing.

#### Freshwater Cladoceran, *Ceriodaphnia dubia*

Cladoceran neonates, *C. dubia* were obtained from AAT, Inc.'s in-house cultures. Cultures for generating test age (<24 hours old) neonates are maintained as single cultures in 30 mL soufflé cups containing 15 mL of moderately hard reconstituted water. These adults are transferred daily into fresh culture water and are fed a combination of a unicellular green alga (*Selenastrum capricornutum*) and a yeast/Cerophyll/trout chow (YCT) suspension. Broods released during a five hour period were pooled and used to initiate the acute toxicity test. No acclimation of these test organisms was required as they were raised in moderately hard reconstituted water, which was used for testing. Neonates were released between 0800 and 1300 of November 19, 2008.

### DILUTION WATER

Moderately hard reconstituted water was prepared in accordance to procedures outlined in EPA/600/4-90/027F and was used as dilution/control water for the toxicity tests. Deionized water (Specialty Filtration Products) and reagent grade chemicals were used to achieve the following concentrations: 96 mg/L of NaHCO<sub>3</sub>, 60.0 mg/L of MgSO<sub>4</sub> and 4.0 mg/L of KCl and 60.0mg/L of CaSO<sub>4</sub> 2H<sub>2</sub>O.

### TEST MATERIAL

The material tested was final effluent collected by Howells and Baird personnel with a grab sampler placed at the outfall. One grab sample was collected for each of the two acute toxicity tests. The sample, collected November 18, 2008, was shipped overnight to AAT, Inc. in a cooler containing ice and was used to initiate testing on November 19, 2008. A Chain-of-Custody accompanied the sample. Tests were initiated prior to the expiration of the 36-hour holding time.

## METHODS

*P. promelas* larvae (9 days old) were exposed to the effluent sample for 96 hours under static, non-renewal conditions. Test organisms were exposed in groups of 10 in 1 L glass beakers containing 500 mL of test solution with two replicates per concentration (20 organisms per concentration). The test organisms were fed prior to test initiation and at 48 hours.

*C. dubia* neonates (<24 hours old) were exposed to the effluent sample for 48 hours under static non-renewal conditions. Test organisms were exposed in groups of five in 30 mL soufflé cups containing 15 mL of test solution with four replicates per concentration (20 organisms per concentration). The test organisms were not fed during the test exposure.

Both sets of test chambers were placed in randomized positions in a temperature controlled environment maintained at  $25 \pm 1^\circ \text{C}$ . The highest concentration used for exposure was 100 %. A 0.56 dilution schedule was used to prepare sample concentrations of 56%, 32%, 18% and 10%, by volume. A control sample consisting of 100 % dilution water was also tested.

Surviving test organisms were counted daily. Dead test organisms and debris were removed daily at this time. Temperature was measured daily in a surrogate replicate placed alongside the test chambers. Dissolved oxygen, pH and conductivity were measured in one replicate chamber at each concentration at the beginning and end of the test exposure. Alkalinity and hardness were measured in the control and the 100% concentration at the beginning of the test exposure. The lighting regime was 16 hours light, 08 hours dark.

## RESULTS

### FATHEAD MINNOW 96-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 96-hour  $\text{LC}_{50}$  is  $> 100\%$ . This result yields an Acute Toxic Unit;  $\text{TUa}$  ( $100\%/\text{LC}_{50}$ ) of 1.0.

### CERIODAPHNIA DUBIA 48-HOUR ACUTE TEST RESULTS

As a result of less than 50 % mortality in any test concentration during the exposure period the acute data was evaluated visually. Therefore, the 48-hour  $\text{LC}_{50}$  is  $> 100\%$ . This result yields an Acute Toxic Unit;  $\text{TUa}$  ( $100\%/\text{LC}_{50}$ ) of 1.0.

Table I. Fathead Minnow Mortality Data

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant  
 TEST: 96-hour Definitive Acute Toxicity Test  
 DATE: 19 November – 23 November 2008

Sample Type	% Effluent	# of Organisms	Cumulative number of organisms affected at				% Mortality*
			24 hr	48 hr	72 hr	96 hr	
Final Effluent	0	20	0	0	1	1	5
	10	20	0	0	1	1	5
	18	20	0	0	0	0	0
	32	20	0	0	0	0	0
	56	20	0	0	1	1	5
	100	20	0	0	0	1	5

\* Cumulative Percent Mortality at 96 hours

Table II. Fathead Minnow Physical/Chemical Measurements

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant  
 TEST: 96-hour Definitive Acute Toxicity Test  
 DATE: 19 November – 23 November 2008

Time	% Effluent by Volume					
	0	10	18	32	56	100
0 hour						
Conduct. $\mu$ mhos	284	329	366	428	547	753
D.O. ppm	8.3	8.3	8.2	7.9	7.6	7.2
Temp. °C A	25.0	25.0	25.0	25.0	25.0	25.0
B	25.0	25.0	25.0	25.0	25.0	25.0
pH Std .units	8.0	8.0	8.0	8.0	8.0	8.1
Alkalinity mg/L	60					180
Hardness mg/L	90					310
24 hours A	26.0	26.0	25.0	25.0	25.0	25.0
Temp. °C B	26.0	26.0	25.0	25.0	25.0	25.0
48 hours A	25.0	25.0	25.0	25.0	24.0	24.0
Temp. °C B	25.0	25.0	25.0	25.0	24.0	24.0
72 hours A	25.0	25.0	25.0	25.0	25.0	25.0
Temp. °C B	25.0	25.0	25.0	25.0	25.0	25.0
96 hours						
Conduct. $\mu$ mhos	322	364	401	463	575	787
D.O. ppm	7.7	7.6	7.7	7.8	7.6	7.9
pH Std .units	8.0	8.0	8.0	8.0	8.2	8.4
Temp. °C A	25.0	25.0	25.0	25.0	25.0	25.0
B	25.0	25.0	25.0	25.0	25.0	25.0



Table I. *Ceriodaphnia dubia* Mortality Data

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant  
 TEST: 48 hour Definitive Acute Toxicity Test  
 DATE: 19 November – 21 November 2008

Sample Type	% Effluent	# of Organisms	Cumulative number of organism affected at		% Mortality*
			24 hours	48 hours	
Final Effluent	0	20	0	0	0
	10	20	0	0	0
	18	20	0	0	0
	32	20	0	0	0
	56	20	0	0	0
	100	20	0	0	0

\* Cumulative Percent Mortality at 48 hours

Table II. *Ceriodaphnia dubia* Physical/Chemical Measurements

CLIENT: Rutgers Organics Corp., Salem Lagoon Water Treatment Plant  
 TEST: 48 hour Definitive Acute Toxicity Test  
 DATE: 19 November – 21 November 2008

Time	% Effluent by Volume					
	0	10	18	32	56	100
0 hour						
Conduct. $\mu$ mhos	284	329	366	428	547	753
D.O. ppm	8.3	8.3	8.2	7.9	7.6	7.2
Temp. °C	25.0	25.0	25.0	25.0	25.0	25.0
pH Std .units	8.0	8.0	8.0	8.0	8.0	8.1
Alkalinity mg/L	60					180
Hardness mg/L	90					310
24 hours						
Temp. °C	26.0	26.0	25.0	25.0	25.0	25.0
48 hours						
Conduct. $\mu$ mhos	347	398	454	524	654	870
D.O. ppm	8.5	8.4	8.4	8.5	8.6	8.7
pH Std .units	8.2	8.1	8.2	8.2	8.3	8.5
Temp. °C	24.0	24.0	24.0	24.0	24.0	24.0

## APPENDIX I

### RAW DATA

19 November – 23 November 2008

RESULTS OF TWO ACUTE TOXICITY EVALUATIONS OF  
RUTGERS ORGANICS CORPORATION,  
SALEM SITE LAGOON WATER TREATMENT PLANT  
FINAL EFFLUENT

# Freshwater Acute Test

American Aquatic Testing, Inc.

Job #: 51-01-87

Start Date/Time: 11-19-88 1415

Species: P. promelas

End Date/Time: 11-23-88 1415

Dilution Water: EPA Mod. Hard

Test Type: 96 hr. SNR

Concentration	Rep.	Live Count					Temperature (C)				
		0 hr.	24 hr.	48 hr.	72 hr.	96 hr.	0 hr.	24 hr.	48 hr.	72 hr.	96 hr.
Control	A	10	10	10	10	9	25.0	26.0	25.0	25.0	25.0
	B	10	10	10	10	10	25.0	26.0	25.0	25.0	25.0
10%	A	10	10	10	9	9	25.0	26.0	25.0	25.0	25.0
	B	10	10	10	10	10	25.0	26.0	25.0	25.0	25.0
18%	A	10	10	10	10	10	25.0	25.0	25.0	25.0	25.0
	B	10	10	10	10	10	25.0	25.0	25.0	25.0	25.0
32%	A	10	10	10	10	10	25.0	25.0	25.0	25.0	25.0
	B	10	10	10	10	10	25.0	25.0	25.0	25.0	25.0
56%	A	10	10	10	10	10	25.0	25.0	24.0	25.0	25.0
	B	10	10	10	9	9	25.0	25.0	24.0	25.0	25.0
100%	A	10	10	10	10	10	25.0	25.0	24.0	25.0	25.0
	B	10	10	10	10	9	25.0	25.0	24.0	25.0	25.0
Initials		TAP	MKP	MKP	MKP	MKP	TAP	MKP	MKP	MKP	MKP
Date		11/19	11/20	11/21	11/22	11/23	11/19	11/20	11/21	11/22	11/23

Concentration	pH		D.O. (mg/L)		Cond. (umhos)	
	0 hr.	96 hr.	0 hr.	96 hr.	0 hr.	96 hr.
Control	8.0	8.0	8.3	7.7	284	322
10%	8.0	8.0	8.3	7.6	329	364
18%	8.0	8.0	8.2	7.7	366	401
32%	8.0	8.0	7.9	7.8	428	463
56%	8.0	8.1	7.4	7.6	547	575
100%	8.1	8.4	7.2	7.9	753	787
Initials	TAP	MKP	MKP	MKP	TAP	MKP
Date	11/19	11/23	11/23	11/23	11/19	11/23

Concentration	Alkalinity (mg/L)	Hardness (mg/L)
Control	60	90
100%	180	310
Initials	TAP	TAP
Date	11/19	11/19

chlorine - 0.02 mg/L

Observations: ① 9' MKP 11/22

# Freshwater Acute Test

Job #: 51-01-87 American Aquatic Testing, Inc.  
 Start Date/Time: 11-19-08 1400  
 Species: C. Albic End Date/Time: 11-21-08 1545  
 Dilution Water: EPA Mod. Hard Test Type: 48 hr. SNR

Conc. %	Temperature (C)		
	0 hr.	24 hr.	48 hr.
Control	25.0	26.0	24.0
10	25.0	26.0	24.0
18	25.0	25.0	24.0
32	25.0	25.0	24.0
56	25.0	25.0	24.0
100	25.0	25.0	24.0
Conc. %	pH (Stand units)		
	0 hr.		48 hr.
Control	8.0		8.2
10	8.0		8.1
18	8.0		8.2
32	8.0		8.2
56	8.0		8.3
100	8.1		8.5
Conc.	Dissolved Oxygen (mg/L)		
	0 hr.		48 hr.
Control	8.3		8.5
10	8.3		8.4
18	8.2		8.4
32	7.9		8.5
56	7.6		8.6
100	7.2		8.7
Conc.	Conductivity (umhos)		
	0 hr.		48 hr.
Control	284		347
10	329		398
18	366		454
32	428		524
56	547		654
100	753		870
Initials	TAP		TAP
Date	11/19		11/21

Conc. %	Rep.	Live Count		
		0 hr.	24 hr.	48 hr.
Control	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
10	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
18	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
32	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
56	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
100	A	5	5	5
	B	5	5	5
	C	5	5	5
	D	5	5	5
Initials		map	KAP	TAP
Date		11/19	11/20	11/21

Observations:

Conc.	Alkalinity	Hardness
Control	60	90
100%	180	310
Initials	TAP	TAP
Date	11/19	11/19

890 North Graham St.  
ALLENTOWN, PA 18109  
610 434 9015

Job #: 51-01-87

Client:

Howells & Baird -

Rutgers Organics

Address:

Salem Ohio

Phone #:

(330) 337-1259

**Client Contact:**

Denny Lane

## Sample

## Return to client

**Disposal:**

## Lab disposal

Samples were:

1. Collected by AAT personnel  
Client personnel

[ 7 ]

2. Transported on ice?

3. Received with in holding time?

4. Sample matrix is:

Liquid ☒ Sediment ☐

[ ]  
 [X]

Yes ☒ No ☐

Yes ☒ No ☐

Soil ☐ Other ☐

CUSTODY INFORMATION									Lab Use
Sample #	Relinquished by:	Received by:	Date	Time	Relinquished by:	Received for Lab:	Date	Time	ISTN#
01	DENNY LANE	Fed ex	11-18-08	1500	Fed ex	C. Kelly	11/19/08	0915	08967
Special Instructions: Dilution water collection date(s) N/A					Will ammonia be analyzed on these samples?		Yes		No
					Will additional parameters be analyzed on these samples?		Yes		No

**APPENDIX II**

**OHIO EPA NPDES BIOMONITORING REPORT FORM**

Date Created: 04/13/98  
Last Revised: 04/13/98

Page 1 of 6

OHIO EPA NPDES BIOMONITORING REPORT FORM

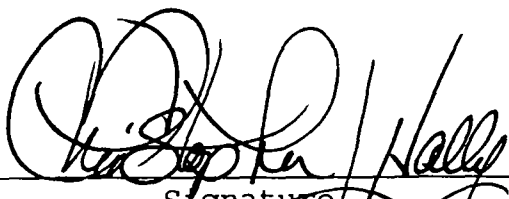
GENERAL INFORMATION

1. Facility Name: Rutgers Organics Corporation  
Reporting Date: 03 December 2008
2. Address: 1224 Benton Road  
Salem, Ohio 44460  
Substantive
3. Ohio EPA Permit Number: Discharge Criteria 4. Application (NPDES) No.
5. Facility Contact: Ralph Pearce 6. Phone No.: (800) 458-3434
7. Consultant/Testing Lab Name: American Aquatic testing, Inc.
8. Consultant/Lab Contact: Chris Nally 9. Phone No.: (610) 434-9015
10. Receiving Water(s) of Discharge: Unnamed Tributary of the Middle Fork of Middle Creek.
11. Outfall(s) Tested: 001

Average Daily Flows:  
on Day Sampled (gal/day)

12. Is your current Standard Operating Procedure (SOP) Manual on file with Ohio EPA? (Yes/No) No If yes, date submitted: \_\_\_\_\_. If no, an SOP that follows Ohio EPA and/or U.S. EPA protocols must be submitted as soon as possible in order to eliminate the need to include this information with every report.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

  
\_\_\_\_\_  
Signature  
Christopher J. Nally, President

12/03/08  
\_\_\_\_\_  
Date

## ACUTE TOXICITY TEST SAMPLING DATA

## TABLE

## Sampling Summary for Acute Toxicity Tests

Sampling Location & Description	Sample Collection		Weather/Receiving Stream Conditions
	Beginning MM/DD/Time	Ending MM/DD/Time	
Final Effluent:	11/18/08 1300	N/A	
Outfall No.: <u>001</u>			
Type (Grab/Composite): <u>Grab</u>			
Volume Collected: <u>1.0-gallon</u>			
Upstream Station:	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Downstream Station (Near-field):	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Additional Stations (If needed):	N/A		
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			
Waterbody:			
Station No.:			
Type (Grab/Composite):			
Volume Collected:			



## TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions	
1. Test Species and Age:	<i>Pimephales promelas</i> - 9 days old
2. Test Type and Duration:	96-hour Static Acute
3. Test Dates:	November 19 - November 23, 2008
4. Test Temperature (°C):	25.0°C ± 1.0°C
5. Light Quality:	50-100 ft. candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	None
8. Size of Test Vessel:	600 mL
9. Volume and Depth of Test Solutions:	500 mL / 92 mm
10. No. of Test Organisms per Test Vessel:	Ten
11. No. of Test Vessels per Test Solution:	Two
12. Total No. of Test Organisms per Test Solution:	20
13. Test Concentrations (as percent by volume effluent):	0, 10, 18, 32, 56, and 100%
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	LC <sub>50</sub> and TU <sub>a</sub>
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

## ACUTE TOXICITY TEST RESULTS

TABLE

Results of a <u>Pimephales</u> <u>promelas</u> <u>96</u> -Hour Static Acute Toxicity Test (genus) (species)								
Conducted <u>11/19/08</u> - <u>11/23/08</u> Using Effluent from Outfall <u>001</u> (mm/dd/yy) (mm/dd/yy) (number)								
Test Solutions	Cumulative Percent Mortality (Cumulative Percent Affected) <sup>a</sup>				LC <sub>50</sub> Values (EC <sub>50</sub> Values)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>1</u> ( <u>5</u> )	<u>1</u> ( <u>5</u> )	<u>&gt;100%</u> ( <u>N/A</u> )	<u>&gt;100%</u> ( <u>N/A</u> )	<u>&gt;100%</u> ( <u>N/A</u> )	<u>&gt;100%</u> ( <u>N/A</u> )
Secondary Control	<u>N/A</u> ( ) ( ) ( ) ( )				LC <sub>50</sub> 95% Confidence Limits (EC <sub>50</sub> 95% Confidence Limits)			
<u>10 %</u> Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>1</u> ( <u>5</u> )	<u>1</u> ( <u>5</u> )	24-Hr	48-Hr	72-Hr	96-Hr
<u>18 %</u> Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	LL <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>32 %</u> Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	UL <u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>56 %</u> Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>1</u> ( <u>5</u> )	<u>1</u> ( <u>5</u> )	LL ( <u>N/A</u> )	( )	( )	( )
<u>100 %</u> Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	<u>1</u> ( <u>5</u> )	UL ( <u>N/A</u> )	( )	( )	( )
Near-Field Sample	<u>N/A</u> ( ) ( ) ( ) ( )				LL = Lower Limit UL = Upper Limit			
					Calculated TU <sub>a</sub> Value: <u>1.0</u>			
					Method(s) Used to Determine LC <sub>50</sub> , EC <sub>50</sub> , and Confidence Limit Values:  Visual Inspection			

<sup>a</sup>-cumulative percent affected is the total percentage of test organisms observed dead, immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):  
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## TOXICITY TEST CONDITIONS

TABLE

Summary of Toxicity Test Conditions	
1. Test Species and Age:	<i>Ceriodaphnia dubia</i> - <24-hours old
2. Test Type and Duration:	48-hour Static Acute
3. Test Dates:	November 19 - November 21, 2008
4. Test Temperature (°C):	25.0°C ± 1°C
5. Light Quality:	50-100 ft candles
6. Photoperiod:	16 hours light / 8 hours dark
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL
9. Volume and Depth of Test Solutions:	25 mL / 20 mL
10. No. of Test Organisms per Test Vessel:	Five
11. No. of Test Vessels per Test Solution:	Four
12. Total No. of Test Organisms per Test Solution:	20
13. Test Concentrations (as percent by volume effluent):	0, 10, 18, 32, 56, and 100%
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water
16. Secondary Control Water:	N/A
17. Aeration? Before/During Test:	None
18. Endpoints Measured:	LC <sub>50</sub> and TU <sub>a</sub>
19. If secondary control water used as diluent due to toxicity in primary control water, indicate number of consecutive tests conducted with alternative diluent:	N/A

## ACUTE TOXICITY TEST RESULTS

TABLE

Results of a <u>Ceriodaphnia</u> <u>dubia</u> <u>48</u> -Hour Static Acute Toxicity Test (genus) (species)								
Conducted <u>11/19/08</u> - <u>11/21/08</u> Using Effluent from Outfall <u>001</u> (mm/dd/yy) (mm/dd/yy) (number)								
Test Solutions	Cumulative Percent Mortality (Cumulative Percent Affected) <sup>a</sup>				LC <sub>50</sub> Values (EC <sub>50</sub> Values)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	<u>&gt;100%</u> ( <u>N/A</u> )	<u>&gt;100%</u> ( <u>N/A</u> )	( )	( )
Secondary Control	<u>N/A</u> ( )	( )	( )	( )	LC <sub>50</sub> 95% Confidence Limits (EC <sub>50</sub> 95% Confidence Limits)			
<u>10</u> % Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	24-Hr	48-Hr	72-Hr	96-Hr
<u>18</u> % Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	LL <u>N/A</u>	<u>N/A</u>		
	( <u>0</u> )	( <u>0</u> )	( )	( )	UL <u>N/A</u>	<u>N/A</u>		
<u>32</u> % Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	LL ( <u>N/A</u> )	( <u>N/A</u> )	( )	( )
	( <u>0</u> )	( <u>0</u> )	( )	( )	UL ( <u>N/A</u> )	( <u>N/A</u> )	( )	( )
<u>56</u> % Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	LL = Lower Limit UL = Upper Limit			
	( <u>0</u> )	( <u>0</u> )	( )	( )				
<u>100</u> % Effluent	<u>0</u> ( <u>0</u> )	<u>0</u> ( <u>0</u> )	( )	( )	Calculated TU <sub>a</sub> Value: <u>1.0</u>			
	( <u>0</u> )	( <u>0</u> )	( )	( )				
Near-Field Sample	<u>N/A</u> ( )	( )	( )	( )	Method(s) Used to Determine LC <sub>50</sub> , EC <sub>50</sub> , and Confidence Limit Values:  Visual Inspection			

<sup>a</sup>-cumulative percent affected is the total percentage of test organisms observed dead, immotile, exhibiting loss of equilibrium, or other defined endpoints (specify below):  
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